

2nd Annual Cooperative Yellowtail Flounder Tagging Meeting

May 2, 2005 – Woods Hole, MA

Participants:

Fishermen:

Rodney Avila Sr.
Carl Buchard
Steve Follett
David Goethel
Fred Mattera
Dennis Robillard Jr.
Scott Westcott

RI Fish & Wildlife:

Sarah Pierce
April Valliere

Manomet Center:

Kris Joppe-Mercure
Greg Morris

SMAST:

Joachim Groeger
David Martins
Rodney Rountree

REMSA Observers:

Janine L'Heureux
Meryl Segal

NE Consortium, UNH:

Rachel Gallant

NEFSC:

Larry Alade
John Boreman
Steve Cadrin

Bill Duffy

Jonathan Duquette

John Hoey

Rob Johnston

Nathan Keith

Stacy Kubis

Kevin McIntosh

Josh Moser

Bill Overholtz

Mike Palmer

Sarah Pregracke

Paul Rago

Fred Serchuk

Gary Shepherd

Vaughn Silva

Azure Westwood

The meeting began with a welcome and introduction from **John Boreman**, the Director of the Northeast Fisheries Science Center (NEFSC). He commended the yellowtail tagging project on its success as a cooperative research project.

Azure went over the contents of the meeting packets, the agenda for the day, and lead a round of introductions.

Steve Cadrin gave a presentation on the background of the yellowtail tagging project and then reviewed the objectives of the project, experimental design, field protocol, outreach, etc. Steve finished up with a summary of Canadian (DFO) tagging that Heath Stone conducted in 2004/2005.

David Goethel presented a summary of 2004 tagging on his vessel (F/V Ellen Diane). The main goals were to avoid cod, dogfish and skates AND still catch a sufficient number of yellowtail in good condition for tagging. To do this, shorter ground cables (15 fa) were used and the hydraulics were slowed down during haul back. Fish were held in round kiddie pools and the deck was kept wet at all times. Some key points from the presentation were:

- 1) Water temperature is an issue in fish survival. Water should be from a clutch pump, not engine water.
- 2) Short handling times are essential.
- 3) How you release the fish matters. We need to minimize orientation time by releasing the fish nose-down into the water.

Dave noted that the majority of recaptured fish are in excellent condition; however, he caught one tagged fish with an infection possibly due to a bad nickel pin. Dave expressed his support and interest in the cage/mortality study slated for 2005. Azure added that they learned a lot about transporting fish for the holding study from colleagues at Great Bay Aquaculture.

Azure summarized the 2004 trip aboard the F/V Blue Skies with Captain Luis Ribas. The major problem on this trip was warm water temps killed 6 of 30 fish that were to be used in the holding study. She then moved on to the first Georges Bank trip of 2004 aboard the F/V Olympia with Captain John Raymond. She noted that offshore trips are very productive with thousands of fish being tagged on each leg. Azure finished up by summarizing the trip aboard the F/V Trident with Rodney Avila Jr. Rob Johnston added that Rodney Jr. was a huge asset to the project, both as a fisherman and a yellowtail tagger – he was an active player in all aspects of the work.

Nathan Keith summarized the 2nd Georges Bank (GB) trip aboard the F/V Elizabeth with Captain Shawn McLellan. Hurricane Alex required the tagging team to alter their trip plans. Despite that, they were still able to tag 3500 fish in 10 days.

Rodney Rountree from School for Marine Science and Technology (SMAST) summarized their tagging work from 2004 (n = 2709). As a side project, they took calibrated photos of ~ 40% of the fish so condition could be looked at. They're searching for a student to take on this task. Rodney presented the results of a circular statistic analysis which showed the direction and distance moved by season.

April Valliere discussed the yellowtail industry based survey (IBS). She explained that tagging was initially part of the project, but turned out to be too much to take on so it was handed over to Massachusetts Division of Marine Fisheries (MADMF) and SMAST. Even though the IBS has great potential for tag recaptures, only 2 fish have been recaptured to date. Steve added that those 2 tags are valuable info.

Steve C. summed up the trip reports by adding that the project has met it's goal of proportional tag distribution and that flexibility in the offshore trips has helped by allowing time to "clean-up" in areas that needed more tags.

Paul Rago gave a summary of the Northeast Tagging Workshop. He stated that all tagging programs are linked and we should learn from other projects. He noted that this project is first rate in its statistical design. Changing the color of High Reward tags to enhance tag returns was a recommendation from the workshop and has been implemented for the 2005 tagging season.

- **David Goethel** suggested that fishermen might be able to help us determine who is reporting tags and who isn't. This will help us calculate a more accurate reporting rate.
- **Rodney Avila Sr.** suggested we improve our outreach/communication with fishermen. He says fishermen are confused as to what they should do with tags

and need more information regarding the tagging project. He also suggested our posters should be double-sided and be more informative.

- **Carl Bouchard** suggested we have tag/scale envelopes available in fish houses and that a prompt response to a tag return is extremely important.
- **Fred Mattera** suggested we emphasize the essential information (tag #, date, location and length) through outreach to improve the quality of the tag return data.
- **Dave Martins** raised the question: What does a fisherman do with a tagged fish when fishing regulations are in place? Steve responded by saying, “If you catch it, return the tag”, explaining that the simplest rule may avoid confusion.

Breakout Discussions:

During the lunch break, participants were organized into groups to discuss the following topics. A brief report of breakout discussions was presented to the entire group after lunch.

1) Protocols

- a. Some deck hoses are too powerful.
- b. Should ice be added to water to keep temperature down? Will this affect salinity?
- c. Should fish with high reward (HR) and data storage tags (DST) be lowered to the bottom in a cage to ensure their survival on the way down?
- d. Should boats with high gunnels use a shoot to release tagged fish?
- e. Tags should be organized in numerical order prior to tagging to minimize data recording errors. However, we still need to confirm the tag number for each fish; we can't assume it's the next number in the series.
- f. Field data sheets and database should be revised to make comments standardized. Revise the protocol to have pictures representing each main comment category.
- g. Some believe wet gloves are necessary for tagging, others say wet hands are ok.

2) Outreach

- a. Does the color of tags increase the likelihood of predation? Rodney Rountree stated that red, orange and yellow are absorbed at depth and are the correct colors to use.
- b. We need to revise the lottery policy to encourage reporting all tags, even those with little information.
- c. We should keep a presence on the docks and distribute tag/scale envelopes to dealers.
- d. A monthly column in Commercial Fisheries News with hot topics, new events, interesting tag returns, star returners, and photos should be submitted.
- e. We should consider giving recognition to a fisherman each month as a “star returner” and post on web, newspaper, docks, service centers, etc.
- f. Information on posters should be more specific.

- g. John Hoey suggested we need more direct outreach to fishermen at meetings. We need to know when and where they occur so we can inform them about up-coming projects. Rodney and Fred said they don't even show up to meetings hosted by fishermen. "We're all fighting the same battle."
- h. We should translate the posters into French to have better communication with the Canadian fishing community.

3) Holding Study

- a. What are some unintended consequences of the holding study? ie: predators, sand fleas (?) – secondary levels of stress. Use of cameras and/or hydrolab may provide more info/insight.
- b. We can take histological samples from fish to determine stress.
- c. Methodology for deploying cages was discussed.

4) Future of YT tagging

- a. We need to meet original objectives for the 2008 yellowtail flounder benchmark.
- b. The center is planning a workshop next fall to focus on analysis of data.
- c. How much time is needed to get the number of recaps to do the analysis is not yet known.
- d. At some point the project will move from tag-release mode to tag-recapture mode.

Lottery Winner: John Hoey drew the winning tag (Tag# 10387), returned by Ignazio San Fillipo, F/V Cat Eyes, out of Gloucester, MA. Ignazio has returned 23 tags to date.

Suggestions for future lottery drawings:

- Provincetown Portuguese Festival, Provincetown, MA - June 23-26, 2005
 - Blessing of the Fleet at MacMillan Pier, Provincetown, MA - June 26, 2005 at 1:00 pm
- St. Peter's Fiesta, Gloucester, MA - June 23-26, 2005
 - Blessing of the Fishing Fleet from the Boulevard (near Fisherman's Memorial Statue) - June 26, 2005 at 3:00 pm
- Blessing of the Fleet, Plymouth, MA - July 16, 2005
- Working Waterfront Festival, New Bedford, MA - September 23-25, 2005
- Safety Training Workshops

A policy on lotteries and eligibility was proposed and modified by the group.

- Lottery drawings are held approximately every 2 months or as fishing industry trade shows, festivals and events arise that are appropriate to host drawings.
- Only 1 tag is drawn.
- Winners must provide their social security number to claim their reward.
- All qualifying tags remain in the lottery bowl for each drawing. Winning tags are removed from the bowl. Vessels who return multiple qualifying tags are eligible. All tags must be mailed to; Attn: YT Tag, 166 Water Street, Woods Hole, MA 02543.
- Tags returned by commercial fishermen with the following info: Name/Address/phone, Vessel name/port, Tag number, Location, Date of recapture.
- Tags returned by processors with at least the following information: Name of person who found the fish, Company name/address/phone, Date tag was found, Point of purchase.
- Tags returned by others (eg. beach-goers, non-related researchers, etc.) are eligible if they provide the following: Name/Address/phone, Company, affiliation, or circumstance in which the tag was recovered, Tag number, Location, Date of recovery
- Tags returned by observers, scientists or other non-fishing cooperators are not eligible.

The group decided that the most important info is Name/Address/Phone, Vessel, Tag #, Date, Location – other info (length, scales, depth, etc. are bonus info). The quality of the location and date are very important; we need to know if they are exact or approximations. For processors, we might only be able to get point of purchase information, not vessel info. We need a token of appreciation for fishermen who return tags that are not eligible for the lottery to keep them interested in the project.

New Website:

- We should replace the seiner with a dragger on the homepage.
- We take TRAC working paper off the website or change its name.
- Should we include contact info for cooperators who appear on the website (email only?)
- Should we include counters for number of tags released and recaptured?
- Add a section about yellowtail bycatch – “Report and return ALL captured tags.” This could go on the poster too.

The next meeting should be in January 2006 to allow advanced planning for 2006 tagging.

Steve C. went over model development and demonstrated how the model works. He stressed that we can't assume a constant harvest rate over the entire year, and that we need a better estimate of reporting rate. Fred Serchuk suggested we get data on

commercial fishing effort to improve our understanding of probability of recapture in stat areas.

Joachim Groeger presented results of Cod DST analysis and inferred movements from oceanographic data.

Steve C. presented results from DST analysis. Fish come off bottom at sunset for approximately 4 hrs. Off-bottom movements are not related to spawning. Off-bottom movements may be related to feeding.

- Fred Serchuk, Rodney Avila Sr., and Fred Mattera all suggested that off-bottom movements may be related to the lunar cycle. We should look at off-bottom movement patterns within months. The fishermen supported the lunar cycle hypothesis by adding they catch more fish on a full moon than a new moon.
- Scott Westcott suggested off-bottom movements may be an avoidance behavior related to skate densities.
- Greg Morris suggested we access the night tow data from the Study Fleet.
- Steve C. suggested we change the release structure for DST tags for 2005 and test a hypothesis instead of scattering tags throughout the region.

Data Storage Tag Deployments:

- April Valliere suggested the Nantucket Lightship Closed Area (NLS).
- Fred Mattera suggested we flood the area where the biggest problem is (ie: SNEMA).
- Rodney Avila Sr. suggested we might not get tags back in SNEMA due to the disincentives to fish there.
- Rodney Rountree advised that 100 tags is not enough to split up into different areas; they all need to go in one place in order to get enough returns for a statistical analysis.
- Carl Bouchard suggested Ipswich Bay.
- Greg Morris suggested Great South Channel to study movements among the three management areas.
- A conclusion on DST strategy for 2005 was discussed (see conclusions below).

Larry Alade presented results of the holding study from 2004 and the scope of the proposed cage study for 2005.

- Fred Serchuk questioned whether 3 days was enough time for the cage study considering the results from the holding study (mortality increased at day 17).
- Others suggested there was a trade-off between a short study and the added effects of starvation, burying, etc with a longer study.
- Fred Mattera noted a URI paper on scup, in which mortality was caused by cages.

2005 Work Plan

- Fred Serchuk suggested we put some tags in area 561 to continue the series.
- Steve went over the bid packages and the bid process.

- The fishermen in the group suggested that the dollar amount needs to increase to account for rising fuel costs.
- Fred Mattera suggested the 'lower' per day amounts might restrict the caliber of vessels that submit bids.

Conclusions from the meeting:

- 1) Data Storage Tags
 - a. In 2005, all 133 tags will be deployed in or near Closed Area II.
 - b. In 2006, DSTs will be deployed in the Great South Channel. The Great South Channel was considered to be a more important management issue than Ipswich Bay, which will be a leading candidate for subsequent DST deployments.
- 2) NLS
 - a. 2006 – 1000 disk tags will be deployed in NLS with a unique number series which will be excluded from the movement-mortality model, but used to study movement near the NLS closure.
 - b. This will require a revision to the proposal/budget to increase number of sea days for deployment of 1000 tags in NLS.
- 3) Criteria for Vessel Selection
 - a. The group agreed that a mix of old and new cooperators is best, and we need to expand the circle of cooperative research.
 - b. We should expand the criterion so that participation in cooperative research includes: returning tags, taking observers onboard their vessel, and attending meetings.
 - c. David Martins suggested we ask fishermen to include number of bunks for offshore trips to be sure they can accommodate the tagging crew.
 - d. Fred Mattera suggested adding a section related to safety. Steve C. added that safety was in the contract requirements, but adding a point about proven vessel safety was a possibility.